

Antiviral Therapy in Abnormally Susceptible Patients

A recent report, as well as our own experience with varicella in a child with leukemia, indicates an area of therapy that, at the moment, seems promising. In the past two years the clinical application of cytosine arabinoside in the treatment of varicella infections in children also suffering from leukemia, has been rewarded with considerable success. The recommended dose is 100 mg per square meter daily intravenously by rapid syringe injection. This was continued for several days. Usually within 48-72 hours after starting therapy the old lesions dry up and no new crops are seen.

The occurrence of herpes simplex in prematures or newborn also requires rapid and intensive therapy. Moreover, the chronically ill child on immunosuppressive therapy with kidney, lung, or connective tissue disease, as well as those with hereditary or congenital defects in their immunity apparatus, are ready prey for infections, and viral infections, in these groups of highly susceptible children, are particularly devastating. Iododeoxyuridine, initially used in herpesvirus keratoconjunctivitis with considerable success, has been used in neonatal disseminated infections with some measure of success. Reports of its use in adults with herpesvirus hominis meningitis have also indicated variable results.

The use of an interferon inducer (polyinosinic-polycytidylic ribonucleic acid) in an infant with herpesvirus encephalitis was associated with rapid clinical improvement.

The development of severe virus infections in abnormally susceptible children should be rapidly evaluated and, if at all possible (weighing risk of disease against risk of treatment), treatment instituted.

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Measles Vaccine Updated

Inactivated, "killed" measles vaccine is no longer available having proved to be unreliable and to provoke late hypersensitivity responses. Attenuated vaccines are available which cause only moderate febrile reactions after about eight days. Gamma globulin may be given coincidentally with the vaccine which reduces these reactions but also decreases the degree of immunity and is recommended only in conjunction with that virus grown on dog kidney.

Children should be vaccinated any time after one year of age, avoiding those with immune deficiencies, malignant disease, acute infections, etc. This is not 100 percent effective, but equals that of most other immunizations. The risk of late encephalitis from the vaccine is probably nonexistent, and children are protected from the severe acute infection and the devastating encephalitis.

During 1970 there was an increase of reported measles. This might have been prevented by more general use of vaccine but may also be due to the periodicity of measles epidemics and more conscientious reporting than formerly.

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Synthesis of Human Growth Hormone

Dr. C. H. Li and his associates, who in 1956 first isolated and purified human pituitary growth hormone, and who in 1966 were able to determine its structure, announced in January 1971 that they had successfully synthesized the human growth hormone molecule. A complex peptide of a specific sequence of 188 amino acids with two disulfide bridges, it is the largest yet synthesized. The event is a major milestone in growth hormone research, although the amount produced was insufficient to adequately verify biologic activity. Among the possible investigative avenues opened by the discovery are those concerning the control of cellular growth, hormonal interrelationships in the regulation of metabolic processes and the control of lactation.